Energy Information Administration

www.eia.doe.gov

# COUNTRY ANALYSIS BRIEFS

# **Equatorial Guinea**

Last Updated: October 2009

## **Background**

Equatorial Guinea's economy has grown rapidly since the country began exporting oil in 1995. Equatorial Guinea has become a significant oil exporter since the discovery and development of large offshore oil reserves in the mid-1990s. While oil production has increased from 5,000 barrels per day (bbl/d) to current levels of close to 365,000 bbl/d, production rates are declining and affecting government revenues which are almost entirely dependent on the sector. According to the <a href="International Monetary Fund's (IMF)">International Monetary Fund's (IMF)</a> latest data, oil exports accounted for close to 75 percent of GDP in 2007. The hydrocarbon sector — mostly crude oil with liquefied natural gas (LNG) playing an increasingly greater role — represented over 95 percent of government revenue and 99 percent of export earnings.



## Territorial Disputes

In recent years, Equatorial Guinea and its neighbors have expanded their offshore oil exploration, which has increased the importance of maritime borders. In March 1999, President Obiang unilaterally adopted an equidistant median line that defined territorial boundaries as stipulated under the U.N. Convention on the Law of the Sea. Cameroon, Sao Tome & Principe, and Nigeria accepted the decision as an improvement over the often disputed traditional boundaries.

Since the 1970s, Equatorial Guinea and Gabon have disputed the ownership of three islands in the Gulf of Guinea, including Mbagne Island. In July 2004, the two countries reached an agreement allowing joint oil exploration in the disputed territories. In February 2006, the presidents of both countries met in Geneva, Switzerland and under U.N. mediation they agreed to resolve any major outstanding border issues.

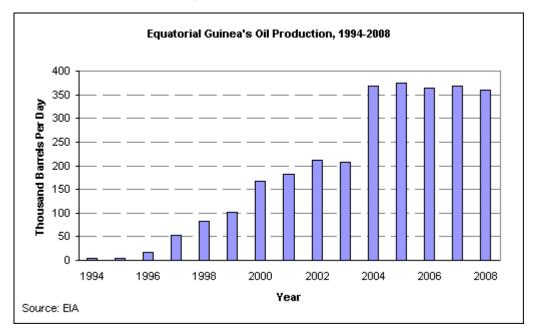
## Oil

Equatorial Guinea is a significant oil exporter, the majority of the country's oil exports are destined According to the *Oil and Gas Journal*, Equatorial Guinea had proved oil reserves of 1.1 billion barrels as of January 2009. The majority of these reserves are located offshore in the oil-rich Gulf of Guinea. Since the 1995 discovery of the Zafiro field, Equatorial Guinea's oil production increased dramatically. In 1995, oil production was 5,000 barrels per day (bbl/d), which increased

## for European, North American and Asian markets.

to 375,000 bbl/d in 2005 but has since decreased to around 365,000 bbl/d in 2008; this decline is forecast to continue in the short-term. New field developments are underway but no additional production is expected before 2012.

Over 300,000 bbl/d of oil production is in the form of crude oil with lease condensates from natural gas production accounting for the rest. All production is exported and the small amount of domestic consumption is met through imports of refined products.



## **Section Organization**

The Ministry of Mines, Industry and Energy is the overall regulatory body for the petroleum industry in Equatorial Guinea. The Equatoguinean government created a national oil company (GEPetrol) that became operational in 2002. GEPetrol's primary focus is to manage the interest stakes of the Equatoguinean government in various production sharing agreements (PSAs) and joint ventures (JVs) with foreign oil companies. While European and Chinese companies are starting to play a role in Equatorial Guinea, the main foreign company involvement is from U.S. companies including Hess, Marathon and ExxonMobil.

In recent years, the government has passed legislation to increase local participation (ownership) to a minimum of 35 percent in foreign investments. In the hydrocarbon sector, this requirement can be met with a 35 percent share allotted to the national oil company, GEPetrol with companies expected to give preference to local staff and resources. As a result, the national oil and gas companies (Sonagas) are expected to play a more substantive role in oil and gas development.

#### **Production**

In 2008, crude oil production came almost entirely from the Zafiro, Ceiba, and Okume fields, while condensate production originated from the Alba field (see below). As of 2009, the Noble Energy-run Anseng field is the only project underway. The Anseng project consists of five offshore fields in Block I that are expected to begin production in 2010 and peak at 50,000 bbl/d.

#### Zafiro Field

In 1995, ExxonMobil and Ocean Energy discovered the Zafiro field, which is located northwest of Bioko Island. Zafiro was the first deepwater field to be brought on stream in West Africa and is currently the main producing field in Equatorial Guinea. Zafiro is currently operated by an ExxonMobil-led consortium and produced an estimated 210,000 bbl/d of crude oil in 2008. While Zafiro continues to be the single largest source of Equatoguinean oil, field production has been in decline since it peaked in 2006 at over 240,000 bbl/d. Zafiro, as of 2005, has been blended with Topacio and marketed as "New Zafiro", a low-sulfur distillate rich crude oil.

## Ceiba Field and Okume Complex

Ceiba, Equatorial Guinea's second major producing oil field, is located just offshore of Rio Muni in exploration Block G, neighboring the Okume Complex. The field contains an estimated 113 million barrels of reserves and began production in December 2000. For most of 2008, around 40,000

bbl/d of oil was produced after a program of water injection to repressurize the reservoir. The field is operated by Amerada Hess, with partners Tullow Oil and GEPetrol. According to IHS Global Insight, other fields in the Okume complex contributed slightly over 60,000 bbl/d of Ceiba Blend in 2008.

## Alba

Alba, Equatorial Guinea's third largest field, is located 12 miles north of Bioko Island. Alba was developed as a major condensate field containing an estimated 400 million barrels of liquids. The field currently produces approximately 70,000 bbl/d of condensates as well as some liquefied petroleum gas (LPG). The associated natural gas that was historically flared from the Alba field is now the main source of feedstock for the Punta Europa liquefied natural gas (LNG) plant on Bioko island (see Natural Gas section). Marathon Oil Corporation serves as operator of Alba field along with GEPetrol.

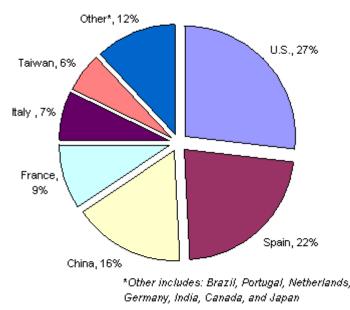
#### **Downstream**

National oil consumption for 2008 was estimated at 1,000 bbl/d, primarily in the form of motor fuel. Getotal, jointly owned by Total and the government of Equatorial Guinea, has a monopoly on the distribution of petroleum products, all of which are imported due to a lack of refining capacity.

#### **Exports**

The majority of Equatorial Guinea's oil production is exported to European, U.S. and Asian markets. In 2008, the United States imported between 80,000 and 90,000 bbl/d of crude and products from Equatorial Guinea. Other major destinations for exports include Spain, China, France and Italy.

## Equatorial Guinea's Oil Exports by Destination, 2008



Sources: Global Trade Atlas, EIA

## Ports

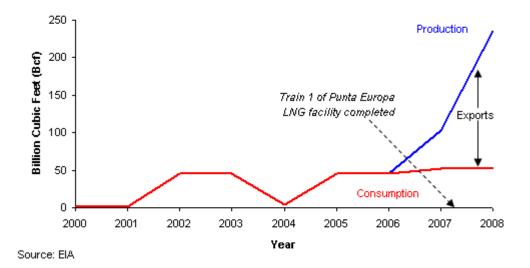
The Luba oil port, located on the west side of Bioko Island, became operational in 2002. Luba has become a transportation hub for the oil and gas industry. In addition, a renovation at the port in Malabo is almost complete and a renovation of Bata port is expected.

## **Natural Gas**

Equatorial Guinea's natural gas production continues to increase. According to the *Oil and Gas Journal*, Equatorial Guinea had 1.3 trillion cubic feet (Tcf) of proven natural gas reserves as of January 1, 2009. The majority of the reserves are located offshore Bioko Island, primarily in the Alba and Zafiro associated natural gas fields. From 2001 - 2008, Equatoguinean natural gas production increased rapidly from 1 billion cubic feet (Bcf) to 236 Bcf as new projects came online. Domestic consumption over the same period went from 1 to 53 Bcf,

increasing along side of production until 2007 when the completion of the Punta Europa liquefied natural gas (LNG) facility on Bioko Island allowed for greater exports.

## Equatorial Guinea Natural Gas Production and Consumption, 1998-2008



## Sector Organization

Following a decree signed by President Obiang in January 2005, the government announced the creation of a state natural gas company, Sociedad Nacional de Gas de Guinea Ecuatorial (Sonagas, G.E.). The responsibilities of Sonagas include managing gas assets and developing an industrial and residential natural gas market, as well as the treatment, distribution, marketing, and exportation of natural gas reserves. As is the case with oil companies, the government requires a minimum local participation of 35 percent in all foreign investments which can be substituted by allotting shares to the state companies.

#### **Exploration and Production**

Natural gas production in Equatorial Guinea has expanded rapidly in the last five years in response to new investments by major stakeholders in the Alba field. Alba, the country's largest natural gas field, contains 1.3 trillion cubic feet (Tcf) of proven reserves, with probable reserves estimated at 4.4 Tcf or more. Throughout the 1990s, oil companies primarily produced condensate and flared the associated natural gas. Currently, the Alba field produces over 600 million cubic feet per day (MMcf/d) of wet natural gas. Marathon Oil (operator) has a 63 percent interest in the field, while Noble Energy holds 34 percent interest and GEPetrol has the remaining three percent. Additional natural gas production could come on-stream in the near-term as ExxonMobil is expected to reduce the amount of associated natural gas that is being flared from the Zafiro field.

#### **Liquefied Natural Gas (LNG)**

Most of Equatorial Guinea's natural gas production is exported in the form of LNG. Marathon Oil Corporation and its partners completed Train 1 of the \$1.4 billion Punta Europa LNG facility on Bioko Island in May 2007. The plant is initially designed to process approximately 3 trillion cubic feet of dry gas from the Marathon-operated Alba Field.

In 2008, Equatorial Guinea exported approximately 166 Bcf, almost all of which went to Asia, mainly Japan (32 percent), South Korea (26 percent) and Taiwan (30 percent), smaller volumes that year went to India, China and Spain. Marathon is planning a second LNG train as Equatorial Guinea carries out feasibility studies on processing stranded gas from Cameroon and Nigeria as well as obtaining additional supplies from the Zafiro field as gas flaring policies take effect.

## **Profile**

## **Energy Overview**

Proven Oil Reserves (2009 Oil & Gas Journal)	1.1 billion barrels
Oil Production (2008)	365 thousand barrels per day

Oil Consumption (2008)	1,000 barrels per day
Net Oil Exports (2008)	364 thousand barrels per day
Proven Natural Gas Reserves (2009 Oil & Gas Journal)	1.3 trillion cubic feet
Natural Gas Production (2008)	236 billion cubic feet
Natural Gas Consumption (2008)	53 billion cubic feet
Electricity Installed Capacity (2007)	0.013 million kilowatts
Electricity Generation (2007)	28 million kilowatthours
Electricity Consumption (2007)	26 million kilowatthours
Total Per Capita Energy Consumption (2007)	96 million Btus

## **Environmental Overview**

<b>Energy-Related Carbon Dioxide Emissions</b>	4.6 million metric tons
(2007)	

Per-Capita, Energy-Related Carbon Dioxide 7.6 metric tons Emissions (2007)

## Oil and Gas Industry

Organization	GEPetrol; Sonagas (national oil and gas companies)
Major Oil/Gas Ports	Luba Port and Malabo Port (almost complete)
Major Oil Fields	Zafiro (210,000 bbl/d), Okume Complex (60,000) Ceiba (40,000 bbl/d), Alba (70,000 bbl/d of condensates)
Major Natural Gas Field	Alba

<sup>\*</sup> The total energy consumption statistic includes petroleum, dry natural gas, coal, net hydro, nuclear, geothermal, solar, wind, wood and waste electric power.

## Links

## **EIA Links**

EIA - Country Information on Equatorial Guinea

#### **U.S. Government**

CIA World Factbook - Equatorial Guinea

U.S. State Department's Country Page - Equatorial Guinea

U.S. State Department's Consular Information Sheet - Equatorial Guinea

U.S. Trade with Equatorial Guinea

## **General Information**

Africa News Service: Equatorial Guinea

MBendi Information Service: Equatorial Guinea's oil and gas sector

African Development Bank: Equatorial Guinea

African Studies: University of Pennsylvania

Columbia University African Studies: Equatorial Guinea

**Extractive Industries Transparency Initiative** 

Franc Zone Investment: Equatorial Guinea (In French)

International Monetary Fund - Equatorial Guinea

Stanford University Africa South of the Sahara Country Pages: Equatorial Guinea

Transparency International

World Bank - Equatorial Guinea

## Oil and Natural Gas

Ministry of Mines, Industry and Energy - Equatorial Guinea

**GEPetrol** 

Sonagas

Amerada Hess

**Devon Energy** 

**ExxonMobil** 

<sup>\*\*</sup>GDP figures from Global Insight estimates based on purchasing power parity (PPP) exchange rates.

Marathon Oil
Noble Energy
Tullow Oil

# **Sources**

African Energy Intelligence
Business Africa Select
Business Monitor International
CIA World Factbook
Economist Intelligence Unit
Energy Intelligence Group
IHS Global Insight
International Monetary Fund
Oil and Gas Journal
Petroleum Intelligence Weekly
Platts Oilgram News
RigZone
World Bank

## **Contact Info**

cabs@eia.doe.gov (202)586-8800 cabs@eia.doe.gov